

**AMENDMENTS TO THE ABSTRACT**

A white X-ray generating means ~~[[ (2) ]]~~ and an X-ray detecting means ~~[[ (3) ]]~~ are respectively moved to a first position ~~(shown by a solid line in the Fig.)~~ and a second position ~~(shown by a one-dot chain line in the Fig.)~~ that are separated, X-ray intensities, for each energy, detected at respective positions by the X-ray detecting means are obtained as first data and second data, a third data, that is refraction-X-ray-only data, is obtained based on the difference between the first data and the second data, and data about fluorescent X-ray is obtained from the difference between the first or second data and the third data.